AgSource Laboratories
A Subsidiary of Cooperative Resources International

106 N. Cecil Street
Bonduel, WI 54107
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Soil Analysis

Submitted By: **BN00914**
ECKSTEIN AGRONOMICS LLC
15721 LIME KILN RD
REEDSVILLE, WI 54230

Submitted For:
Orthland Dairy

Laboratory Sample #
AY70915 - AY70930

Date Received:
11/16/2016

Date Processed:
11/18/2016

Information Sheet #
785618

County: Manitowoc
Account No: BN00914
Field: JG1
Acres: 50.0
Soil Name/Subsoil group: Kewaunee
Plow Depth: 7.00
Previous Crop:
Slope:
Irrigated: No
Tiled: No

NUTRIENT RECOMMENDATIONS

Cropping Sequence	Yield Goal	Crop Nutrient Need N	P_2O_5	K_2O	Fertilizer Credits Legume N	Manure N	P_2O_5	K_2O	Nutrients to Apply N	P_2O_5	K_2O
	- per acre -	--------- lbs/a ---------			--- lbs/a ----	--------- lbs/a ---------			--------- lbs/a ---------		
Corn, silage	15.1-20 ton	190	95	185	0	0	0	0	190	95	185
Wheat, grain + straw	61-80 bu	0	75	120	0	0	0	0	0	75	120
Soybean, grain	46-55 bu	0	70	100	0	0	0	0	0	70	100
Alfalfa, established	5.6-6.5 ton	0	110	400	0	0	0	0	0	110	400

There is no lime recommendation. Please see Additional Information below.

TEST INTERPRETATION

LABORATORY ANALYSIS / LAB USE / MISC

Sample ID	Soil pH	O.M. %	Phosphorus PPM	Potassium PPM	60-69 Lime Req T/a	Calcium PPM	Magnesium PPM	Boron PPM	Manganese PPM	Zinc PPM	Sulfate Sulfur	Sulfur Avail Index	Texture Code	Sample Density	Buffer Code	Total CEC	% Base Saturation %K	%Ca	%Mg	Tot %	%H
Adjusted Avg:	7.4	2.9	16	101		2148	661									16.4	1.6	65.3	33.1	100.0	
01	7.6	2.9	13	106		2244	659						2	1.01		16.9	1.6	66.4	32.0	100.0	
02	7.6	3.0	17	114		2821	721						2	0.98		20.3	1.4	69.5	29.1	100.0	
03	7.5	2.5	15	94		2107	654						2	1.02		16.1	1.5	65.3	33.2	100.0	
04	7.4	3.0	22	129		2155	649						2	1.00		16.4	2.0	65.6	32.4	100.0	
05	7.4	2.8	16	111		1994	588						2	1.04		15.1	1.9	66.1	32.0	100.0	
06	7.3	2.5	14	89		1908	630						2	0.97		14.9	1.5	63.9	34.6	100.0	
07	7.2	3.4	19	89		2077	680						2	0.97		16.2	1.4	64.2	34.4	100.0	
08	7.3	3.1	18	96		2018	667						2	1.01		15.8	1.6	63.8	34.6	100.0	
09	7.3	2.8	17	99		1899	636						2	0.99		15.0	1.7	63.5	34.8	100.0	
10	7.4	2.7	9	87		2260	730						2	1.00		17.5	1.3	64.5	34.2	100.0	

SECONDARY & MICRONUTRIENT RECOMMENDATIONS

Interpretations ----------> Ca-H Mg-H

Response to added Ca is unlikely.
Response to added Mg is unlikely.

ADDITIONAL INFORMATION

N.R.=Not required for calculation of lime requirement when soil pH is 6.6 or higher.
Starter fertilizer (e.g. 10+20+20 lbs N+P2O5+K2O/a) is advisable for row crops on soils slow to warm in the spring.
If alfalfa will be maintained for more than three years, increase recommended K2O by 20% each year.
If you want to consider adjusting N rates for corn silage see http://uwlab.soils.wisc.edu/pubs/MRTN/
Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.
A lime recommendation is calculated only when soil pH is more than 0.2 units below the optimum pH. Starter fertilizer (e.g. 10 + 20 + 20 lbs N + P_2O_5 + K_2O/a) is advisable for row crops on soils slow to warm in the spring.
A soil nitrate test may better estimate actual corn N needs. If conservative tillage leaves more than 50% residue cover when corn follows after corn, add an additional 30 N lb/a.

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County: Manitowoc
Account No: BN00914
Field: TG1
Acres: 30.0
Soil Name/Subsoil group: Kewaunee
Plow Depth: 7.00
Previous Crop:
Slope:
Irrigated: No
Tiled: No

NUTRIENT RECOMMENDATIONS

Cropping Sequence	Yield Goal	Crop Nutrient Need N	P_2O_5	K_2O	Fertilizer Credits Legume N	Manure N	P_2O_5	K_2O	Nutrients to Apply N	P_2O_5	K_2O
	- per acre -	--------- lbs/a ---------			--- lbs/a ----	--------- lbs/a ---------			--------- lbs/a ---------		
Corn, silage	15.1-20 ton	190	35	145	0	0	0	0	190	35	145
Wheat, grain + straw	61-80 bu	0	25	80	0	0	0	0	0	25	80
Soybean, grain	46-55 bu	0	20	70	0	0	0	0	0	20	70
Alfalfa, established	5.6-6.5 ton	0	40	360	0	0	0	0	0	40	360

There is no lime recommendation. Please see Additional Information below.

TEST INTERPRETATION

LABORATORY ANALYSIS

LAB USE

MISC

Sample ID	Soil pH	O.M. %	Phosphorus PPM	Potassium PPM	60-69 Lime Req T/a	Calcium PPM	Magnesium PPM	Boron PPM	Manganese PPM	Zinc PPM	Sulfate Sulfur	Sulfur Avail Index	Texture Code	Sample Density	Buffer Code	Total CEC	% Base Saturation %K	%Ca	%Mg	Tot %	%H
Adjusted Avg:	7.6	2.1	28	129		1625	376									11.5	2.9	70.3	26.8	100.0	
1	7.6	2.5	38	157		2026	436						2	1.04		14.1	2.8	71.8	25.3	100.0	
2	7.7	2.5	29	136		2048	469						2	1.05		14.4	2.4	71.0	26.6	100.0	
3	7.6	1.6	25	136		1193	302						1	1.14		8.8	4.0	67.9	28.2	100.0	
4	7.6	2.1	26	125		1551	368						2	1.09		11.1	2.9	69.9	27.2	100.0	
5	7.6	1.8	23	94		1354	306						1	1.13		9.5	2.5	71.1	26.3	100.0	
6	7.6	2.0	27	128		1576	376						1	1.09		11.3	2.9	69.8	27.3	100.0	

SECONDARY & MICRONUTRIENT RECOMMENDATIONS

Interpretations ----------> Ca-H Mg-Opt

Response to added Ca is unlikely.

Soil Mg is optimum. Maintain level with dolomitic lime.

ADDITIONAL INFORMATION

N.R.=Not required for calculation of lime requirement when soil pH is 6.6 or higher.

Starter fertilizer (e.g. 10+20+20 lbs N+P2O5+K2O/a) is advisable for row crops on soils slow to warm in the spring.

If alfalfa will be maintained for more than three years, increase recommended K2O by 20% each year.

If you want to consider adjusting N rates for corn silage see http://uwlab.soils.wisc.edu/pubs/MRTN/

Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.

A lime recommendation is calculated only when soil pH is more than 0.2 units below the optimum pH. Starter fertilizer (e.g. 10 + 20 + 20 lbs N + P_2O_5 + K_2O/a) is advisable for row crops on soils slow to warm in the spring.

A soil nitrate test may better estimate actual corn N needs. If conservative tillage leaves more than 50% residue cover when corn follows after corn, add an additional 30 N lb/a.

Nitrogen Application Rate Guidelines for Wheat

(For more info, see http://www.soils.wisc.edu/extension/pubs/A2809.pdf.)

SUGGESTED N APPLICATION RATES FOR WHEAT AT DIFFERENT N:WHEAT PRICE RATIOS

Loamy Soil and Previous Crop	N:Wheat Price Ratio ($/lb N:$/bu) 0.05 Rate	0.05 Range	0.075 Rate	0.075 Range	0.10 Rate	0.10 Range	0.125 Rate	0.125 Range
	lb N/a (Total to Apply) *1							
Corn *2 : < 50 or no PPNT	75	65-85	70	55-80	60	50-70	55	40-65
Corn : 51 to 100	45	35-55	40	30-50	35	25-40	30	20-35
Corn : > 100	0	0-0	0	0-0	0	0-0	0	0-0
Soybean, Small grains : All *3	55	45-65	50	40-60	45	35-50	40	35-45

*1 On loamy soils with < 2% organic matter, add 30 lb N/a to all rates. On soils with more than 10% organic matter, reduce rates by 30 lb N/a. Reduce N rates by 10 lb N/a for spring wheat on all soils. No N is required on organic soils. Manure N credits must be subtracted from these values.

*2 If wheat follows a forage legume or leguminous vegetable, use the MRTN rate for wheat following corn with PPNT < 50 and take the legume credit.

*3 Previous crop soybean or small grain: If a PPNT is taken and the PPNT is < 50 lb N/a, use the top end of the profitable range; if the PPNT is 51 to 100 lb N/a, use the bottom end of the profitable range; if the PPNT is > 100 lb N/a, no additional N is needed. Do not take a soybean legume credit.